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L'Ara Rouge, ? D'AUBENTON, Pl. Enl. 12. — BRISSON, Orn., IV, p. 183 (1760) (part).

The Red and Blue Maccaw (part) EDWARDS, Birds, IV, p. 158 (1751). — LATHAM, Gen. Hist. Birds, II, p. 102 (1822).¹

NESTING HABITS OF BIRDS IN MISSISSIPPI.

BY CHARLES R. STOCKARD.

(Concluded from p. 158.)

THE FOLLOWING observations complete a summary appearing in this journal of the nesting habits of birds recorded by the writer in Mississippi from 1895 to 1903 inclusive. As stated in the introduction to the former article, no attempt is made to enter into the details of nest building and such matters as are commonly known. Only the important facts regarding nesting seasons, places, and peculiarities are stated, these being of general interest coming from a locality hitherto not specially observed.

45. *Cyanocitta cristata*. BLUE JAY (concluded). — The outside of the Jay's nest is composed of coarse sticks and above these is then daubed and plastered a thick coat of mud; here the work seems to stop for several days, apparently to allow the mud to dry and harden more advantageously than it would if immediately covered with the lining of fibrous roots which is to be later added. In many cases cloth, paper, strings, leaves, etc., enter into the composition of the nest. One was found with no lining whatever, the eggs being deposited on the hard mud floor.

The sets taken early in the season contained almost invariably five eggs while those observed near the close of the laying time, about the last of May, consisted of only four. Whether these late sets were second layings of the season or not I am unable to state, but in some instances such was apparently not the case. The Blue Jay's earliest set was found March 29, 1899, and the latest June 5, 1897.

46. *Corvus americanus*. AMERICAN CROW. — The Crow is common throughout the State and detested by most farmers as a corn consumer.

¹ The references to Latham's 'Index' and 'Synopsis' are given in this book.

A total of forty-two nests were visited, all situated in pine trees with the exception of two that were in large water oaks and one in a hickory. In each case the nest tree was in dense foliage with the one exception of that in the hickory, which was utterly bare, and the nest was fully exposed to view on three of its sides. One nest was only twelve feet up in the forks of a dwarfed pine, while another was about seventy feet from the ground in a large water oak, the average distance from the ground being about forty feet. The nest tree always stood in more or less of a wood, never out in a clearing. In the east central part of the State nearly all nests contained five eggs, while in the southwest portion only one set of five was taken, all others containing only four eggs. March 9, 1901, the earliest set was collected and the latest was found on April 22, 1900. The Crows generally became very noisy in the neighborhood of the nest tree as soon as one had well started on his climb, so that the observer felt almost certain about the condition of the nest that he was struggling to reach.

47. *Agelaius phoeniceus*. RED-WINGED BLACKBIRD. — This was by far the most plentiful blackbird of the marshes, and often nested in considerable colonies. A small marsh in Lowndes County was found to contain on May 30, 1896, forty-seven occupied nests of these birds. The marsh was not visited again for three years; then only nineteen nests of the season were found. This falling off in numbers was probably due to the fact that the fields near the marsh were now under cultivation, and that the farmers tried to destroy these birds, which are very fond of corn and are often industrious enough to scratch it up shortly after it has been planted. In the spring of 1901 eleven nests of the Red-wing were found in a peach orchard which was located one mile from the Mississippi River, but the ground was dry and not at all marshy. I never saw the nest actually placed on the ground but have found several only a foot from it, and have visited others twenty-five feet up, but they were generally situated about six or eight feet high in small shrubs or bushes. The nests were plaited in between the prongs of vertical forks or fastened to the stalks of several reeds growing close together. The set generally contained four eggs, though in many cases it consisted of only three. Their nesting time was rather late in the season, the limiting dates noted being May 12 and June 27; the height of the breeding time was about June 1.

48. *Sturnella magna*. MEADOWLARK. — The pleasant call of this bird is the most familiar note of many fields and pastures. Its nest is placed in a slight depression on the ground near the base of a small bush or tuft of sedge or other grass. The nest is as a rule arched over the top in oven-bird fashion, but is again sometimes almost roofless. The female is usually found at home and will allow one to approach within a few feet before she is flushed, then she flutters and staggers off as if utterly unable to fly, as was noted above in reference to the Mourning Dove, Killdeer, Chuckwill's-widow, and is a common trick of many smaller birds that

nest on the ground. No doubt this serves them well in drawing off other animal intruders from their eggs and young. I have seen an untrained dog follow a bird for many yards snapping at her every few paces until she was a safe distance from her nest when she arose and flew swiftly away to a perch from which she might watch results. The pursuer was so dismayed at her ability to escape that he would rarely turn to go back in the direction of the nest, and it was highly probable that in his intense interest in the chase the nest was entirely overlooked. The extreme dates of noting these eggs were April 29, 1898, and June 7, 1896.

49. *Icterus spurius*. ORCHARD ORIOLE. — This species was rather abundant in all parts of Mississippi while the following one, *galbula*, was locally distributed. The cup-shaped nest of *spurius* is easily found in orchard trees as well as in the trees along roadsides and in many groves. Though the nest is not quite so deep as that of the Baltimore it is just as artistically constructed yet not so gracefully swung. The grass forming the outer nest wall is in some cases a rich golden while in others it has a decided greenish tinge, giving in each instance a neat new appearance. On May 17, 1900, a set of seven eggs of this species was taken, which is larger than any other set that the writer has seen recorded for this bird. The earliest full set was found May 4, 1899, and the latest on June 8, 1900. Most sets contained five eggs but six was not uncommon. Finally mention should be made of two nests that were extremely interesting in their uniqueness. In both cases these nests were completely hidden and tucked away in large masses of Spanish moss which swung from the limbs of live oak trees. The birds had worked their way into the moss and constructed their nest, using, however, the ordinary building material and not the moss which served only to conceal and suspend their home. These nests were very attractive pieces of bird work.

50. *Icterus galbula*. BALTIMORE ORIOLE. — The distribution of this bird was rather remarkable; in many counties it was not seen at all, while in other parts of the State it was as plentiful as the Orchard Oriole. Adams County was more highly favored by its presence than any other section closely observed. I found near Natchez as many as four occupied nests in a single oak tree. The nests were either tied or plaited to the prongs or forks with cotton cord or various strings, and when these seemed not available grass blades and stems served equally as well. The sets were generally composed of five eggs and were all collected during the month of May.

51. *Quiscalus quiscula*. PURPLE GRACKLE. — These grackles were found nesting in the trees of small marshes and also in the large oaks and gums of hill sides. They nested more or less in company and no nest was found situated alone. Several nests were often placed in the same tree. In the Lowndes County marsh mentioned in connection with the Red-winged Blackbirds this grackle also nested in large numbers. Their nests were placed overhead in the gum and willow trees while the Redwings occupied the bushes below. On May 30, 1896, in this marsh

fourteen occupied nests of the grackle were found. In Oktibbeha County was a low hill-top on which stood about ten large gum trees, and the Purple Grackles built in these each season. Most sets contained five eggs but four was not an uncommon complement. The earliest set was noted May 3, 1896, and the latest June 6, 1899.

52. *Quiscalus major*. BOAT-TAILED GRACKLE. — These birds were rarely seen, but on one occasion a marsh was visited in which they nested, though it was too late for their laying season, the date being June 21. The newly fledged young were fluttering about and many of the adults were flying nervously from tree to tree.¹

53. *Passer domesticus*. ENGLISH SPARROW. — As in almost all parts of the country this sparrow is truly a nuisance in Mississippi. No one after observing can doubt the fact that these pests are driving many native birds into the background. They have taken possession of many martin houses, bluebird and woodpeckers' nests, as well as every other available cavity they can find. They nest under the eaves of houses and in the vines clinging to the walls of buildings. Thus some buildings with vine-covered walls have at times become almost uninhabitable on account of the bird lice that wander all through the house from the nests in the vines. There was a church in Columbus the walls of which were completely covered with ivy and the ivy was almost as completely filled with sparrows' nests. Permission was obtained to raid this colony and in one day four hundred and fifty-nine eggs were taken and about seven hundred young sparrows were killed. The mass of hay and trash used in building these nests was astonishing; it at least can never be held against the sparrow that she is too lazy to carry nest material unless on account of their compound nests mentioned below. Several compound nests were found, one a large ball of hay with three small openings each leading to a separate feather-lined chamber containing a set of eggs. Single nests were also seen containing a brood of feathered young and a set of slightly incubated eggs, which were probably warmed by the young, but of course this cannot be positively stated. In Mississippi these birds nest during almost the entire year, but no exact data were obtained as to the total number of sets produced by a single pair within twelve months.

54. *Spizella socialis*. CHIPPING SPARROW. — This sparrow was rather common along the edges of sparse woods and in young pine brakes. All nests found were hidden in the thick foliage of young pines from four to fifteen feet above the ground. A number of pairs were accustomed to nest year after year in the same young pine brake. May 7 the earliest set was taken, and sets were seen as late as June 10.

55. *Spizella pusilla*. FIELD SPARROW. — These birds select various

¹ Since this paper was sent to the printer I have found three large colonies of Boat-tailed Grackles nesting in Washington County. They began laying April 28, and all the sets contained five eggs each.

sites for nesting such as blackberry vines, low hawthorn bushes, and often the nest is tucked down into a tussock of sedge grass. The sparrows are common in the fields, along the edges of woods, and among the bushes bordering roadsides. A large number of sets were observed, most of them consisting of four eggs but many had only three. For so small a species their nesting season began rather early, eggs being found on April 14, 1900, and the latest were seen on May 21, 1896.

56. *Peucæa æstivalis bachmanii*. BACHMAN'S SPARROW. — Only one nest of this sparrow was found. The birds were very rare, being seldom seen. The one nest was built over a slight depression on the ground close beside a small bunch of weeds, and composed of dead grass blades and stems. It was totally roofed over and the eggs could only be seen by slightly stooping so as to look back under the roof where they lay upon the nest bottom of grass. The location was near a brake of mixed pine and oaks. The date of finding was May 14, 1896, and the nest contained four fresh eggs.

57. *Pipilo erythrophthalmus*. TOWHEE. — The Towhee is common in most of the small brakes and woods and its strong note is a familiar sound through the entire year. All the nests were placed in low thick bushes or vines, usually two or three feet from the ground; none were seen directly on the ground. They lay during the month of May and comparatively fresh sets were taken June 6, 1899, and June 3, 1902. There were always three eggs in the set.

58. *Cardinalis cardinalis*. CARDINAL. — The 'Redbird,' as it is generally termed through the Gulf States, was common everywhere, and so familiar has it become that the nest is often placed in the vines that shade the galleries and arch the entrances of houses. They were found nesting in rose bushes and vines of the flower gardens, and in orchards their nest was a common sight. When, on the other hand, they were found in the deep woods and the thickest canebrakes, they were very shy and would flit off of the nest sometime before the disturber came close to it, flying away to a safe distance and uttering their twitter at intervals until danger was past. Three eggs almost invariably constituted the set in this section; in the many seen only two or three contained four eggs. The Cardinal was an early nester, beginning about the tenth of April and fresh eggs are rarely taken after May 20. Some eggs were scarcely spotted at all while some were covered almost entirely by large light chocolate blotches. In sets of three eggs two were usually lightly marked while the third was so heavily spotted that it resembled its set mates only in size. In one set of four that I have all the eggs are similarly marked.

59. *Guiraca cærulea*. BLUE GROSBEAK. — This very interesting species was by no means a stranger in Mississippi, nor was it very common in many portions. The earliest set was found on May 9, and the latest on June 1. Several sets were found, all consisting of four eggs each.

In connection with this bird the following interesting and peculiar observation was made.—May 18, 1895, a nest containing four fresh eggs

was found in the bushes that bordered a country road in Lowndes County. This road was used in the fall and winter for hauling cotton and some of the lint remained tangled in the bushes throughout the year. The nest was placed three and one half feet from the ground in a crotch of a small gum bush, and the outer part of it was cotton giving the whole much the appearance of a ball of lint caught in the branches. This nest and set of four eggs were taken. Two weeks later, June 1, on chancing to pass along the same road and glancing toward the former nest bush a second nest was seen. This was exceedingly like the other, its outer part being of cotton, and was placed in the identical crotch from which the first had been removed. On approaching it was found also to contain four fresh Blue Grosbeak's eggs. This was rather quick work, building a nest and laying four eggs within fourteen days. These birds are not very common in this section and it looks highly improbable that two pairs would have selected the same fork of a bush during one season. Presuming that one pair built both nests, which seems to be the case, this is a most marked illustration of the lack of ability to select another site when one proves so unfavorable. Considering the promptness with which the nest was replaced evidently no attempt was made to choose another suitable bush from the many close at hand.

60. *Passerina cyanea*. INDIGO BUNTING.—This bunting was not a common bird, but it was often seen perched on the tops of bushes or the tip of a weed where it uttered its pleasant warble, more frequently about midday. The nests were found in low bushes and blackberry vines near the edges of fields, but were also found in dense cane thickets, in which locality the foundation of the nest was made entirely of cane leaves. The nest was placed only a few feet from the ground. The sets usually contained three eggs, rarely four. The earliest noted set was May 6, 1897, and the latest June 9, 1900.

61. *Passerina ciris*. PAINTED BUNTING.—In only one county of the State was this bunting seen.¹ In Claiborne County they were plentiful, though I did not have an opportunity to observe their nests. Directly across the river in Louisiana they were common almost everywhere and nests were easily found. The male was often caged and known by the foolish name 'pop.'

62. *Spiza americana*. DICKCISSEL.—The Black-throated Bunting, as this bird is also called, was commonly seen. The nests were occasionally found though only two were recorded before the spring of 1900. That spring a large field was located that had been planted in vetch the previous fall and by the first of May a long luxuriant growth completely covered the land. This arrangement evidently appealed strongly to the Dickcissels, for late in April they could be seen in all parts of the field,

¹ I have since found the Painted Bunting rather common in Washington County.

and they were singing during most of the day from the rails of the fence that surrounded it. I had collected in this district during the four previous seasons and had never observed one fourth as many of these birds in all as were now to be seen in this single field. How had they located the place and from where had they come? During the month of May fourteen nests were found and at least as many more could probably have been located with careful searching. The nests were placed in clumps of tangled vetch only a few inches above the ground. Eleven sets were composed of five eggs each and three contained four each. They were collected from May 9 to 23, 1900.

63. *Piranga rubra*. SUMMER Tanager.—These birds seem to have a foolish fancy for building their nests on horizontal branches that overhang roadways. They were rather common and many nests were found each season, fully half of which were placed in trees along the wayside. The male was usually accommodating about leading the collector to his mate's nest, and one with slight experience in observing his antics could go almost directly to the nest tree. The observer finally felt that whenever he heard the male's call during the nesting season a Tanager's nest was soon to be noted. They build a neat home of smooth contour and always lined with a golden yellow grass straw or a similar greenish straw giving to the concavity of the nest a very characteristic appearance; the common 'pepper grass' stems make a favorite material for the outer layer. About one half of the sets contained four eggs while the others contained only three. Some of these eggs are so similar in appearance to those of some Mockingbirds that when a large number of the two kinds are scattered together it is not an easy task to discriminate between them. The earliest set was found April 28, 1896, and the latest June 6, 1900.

64. *Progne subis*. PURPLE MARTIN.—No farm cabin is complete without its martin-box or pole with several gourds strung near the top as nesting places for these birds. They also come to the smaller towns, though they are far less evident during the past several years, as the English Sparrow has usurped most of their breeding places. The eggs are generally deposited in May, and four or five compose the sets. A rather neat nest of sticks and straw is constructed.

65. *Riparia riparia*. BANK SWALLOW.—Along the perpendicular banks of rivers and creeks, in railroad cuts, and in the cliff-like hill sides many of these swallows were found digging their tunnels. They were numerous along the banks of the Tombigbee River where dozens of holes were often seen in a single cliff. They dig their own tunnels and in the back of these their nest of sticks and straw was placed.¹ May and the

¹ On May 2 of this year I found a Bank Swallow's nest placed in a Kingfisher's deserted tunnel. The tunnel was six feet long, and three feet from the entrance it made a bend of 45 degrees, and at this place the swallows had placed their nest.

early part of June constituted the chief laying season, and the sets consisted of four, five, and six eggs. One set of four eggs was taken April 21, 1897, which was the earliest set noted.

66. *Lanius ludovicianus*. **LOGGERHEAD SHRIKE.**—This species is commonly termed 'Butcher-bird,' on account of its well-known murderous reputation. The Shrike's favorite nesting places were orchard trees or the hawthorn bushes of open pastures. The nest was comparatively large and usually composed of a number of different materials but it was almost invariably thickly lined with wool and feathers. The sets contained either five or six eggs, the one number about as often as the other. March 30, 1898, was the earliest date of observing a complete set, and June 2, 1899, was the latest day on which eggs were found.

67. *Vireo olivaceus*. **RED-EYED VIREO.**—The Red eyed was the most plentiful vireo observed, and was usually to be found in all small brakes and woods. The pensile nest was swung from a small fork about ten feet up, though one was situated sixty feet from the ground in the top-most boughs of a gum tree. Three or four eggs constituted the sets. The extreme dates of finding full sets were May 9, 1897, and June 14, 1899. The birds were very shy when nesting. On leaving three partial sets to be completed, after I had merely looked into the nests, all three were deserted. Whenever an unfinished nest was molested in the slightest way, it was abandoned.

68. *Vireo gilvus*. **WARBLING VIREO.**—Only one nest of *gilvus* was seen, and the birds were not at all abundant. The nest was suspended from the prongs of a fork in a small oak sapling, and resembled very closely that of the Red-eyed. It was eighteen feet from the ground and contained a set of four fresh eggs on May 28, 1896.

69. *Vireo noveboracensis*. **WHITE-EYED VIREO.**—This vireo was almost as frequently seen as the Red-eyed. It confines itself, so far as observed, to rather deep woodlands, only in exceptional cases being seen along the roadsides. The nests were found in the low bushes that formed the undergrowth of woods. This nest is never to be confused with that of the Red-eyed by any one who has seen several of each; it is smaller in circumference, though deeper, and has a characteristic color, being composed of special material. The nests were usually placed about waist high. This vireo was also provokingly willing to abandon its home and eggs; whenever the nest was slightly disturbed it was very apt to be deserted, though the bird was apparently not in the vicinity when the offence was committed. Three eggs constituted the sets recorded and all were taken during the month of May.

70. *Seiurus aurocapillus*. **OVEN-BIRD.**—These birds were rare in those portions of Mississippi in which I collected. Only two were seen during the breeding season, though their call was occasionally heard. On May 26, 1895, the only nest was taken. It was constructed of leaves, grass, fibres, and straw, and was almost perfectly roofed over. This structure was placed at the base of a tuft of vines and grass and contained

five fresh eggs. The site was a wooded valley near the foot of a hill in Lowndes County.

71. *Geothlypis trichas*. MARYLAND YELLOW-THROAT. — This was by far the commonest of the few warblers found nesting in the State. Almost every marshy stream had its Yellow-throats. In the tussocks of grasses and rushes its nests were often seen. The nest of grass blades and small straws was tucked down into the center of these tussocks or placed on the ground at the base of such a clump. Many sets were found, all consisting of four eggs, and some were beautifully lined while others were speckled. April 28, 1896, was the earliest date of finding a nest, and in 1900 one was taken as late as May 26 containing a fresh set of four.

72. *Icteria virens*. YELLOW-BREASTED CHAT. — Nests of this bird are often found in the edges of sparse woods, along lake banks, and in the bushes of groves. The birds build in blackberry vines or small heavily leaved bushes, and the nest is composed of leaves and grass lined with fine grass straw. All complete sets consisted of four eggs.

In 1900 I noted a very interesting feat on the part of this bird; a similar performance was recorded above for the Blue Grosbeak. May 17 a nest containing four fresh eggs of the Yellow-breasted Chat was found in a hawthorn bush which stood near the edge of a small wood. The nest and set were taken from the bush and added to my collection. On May 26, only nine days later, strange as it may seem, while passing again along this wood border and looking toward the bush that had favored me on the 17th my surprise was to see a chat slide from her nest that now occupied the identical spot from which the other had been removed. This nest also contained a set of four fresh eggs, and it seems as certain as anything could be under the conditions that the same female built both nests and laid both sets. The eggs of the two sets when placed together were indistinguishable, and most observers appreciate the fact that a slight set difference exists among nearly all sets that are laid by different females.

92. *Mimus polyglottos*. MOCKINGBIRD. — No farmyard, garden, or meadow is complete without its pair of these master singers. The Mockingbird is also present in the towns and villages. On summer nights while the moon shines these birds seem to overflow with song, and their vocal performances often continue through almost the entire night; they may also be occasionally heard on perfectly dark nights.

In Mississippi the Mockingbird is sedentary, being present during the entire year. They seem strongly inclined to remain near a nesting site when it has been once chosen, and will often build year after year in the same bush or vine, although none have been found to use a nest for the second season. Six nests of the Mockingbird were once counted in a single large hawthorn bush; one of them contained eggs and the others were in different degrees of dilapidation; they were all probably the work of a single pair. This bird will nest in the vines shading a door or win-

dow and does not seem to object to having its eggs and young closely observed, provided they are not touched. Orchards and roadsides are their favorite nesting places. The nest is rather large and often bulky, the outer foundation consisting of coarse sticks; it is lined with various materials, such as moss, root fibres, etc. In 1902 a Mockingbird's nest was found in a hollow of an old pine stump, the only nest observed in such a place. Several nests were seen placed between the rails of fences and in piles of dead brush.

On May 30, 1897, two nests were found which contained runt or diminutive eggs; one held a single runt and three normal eggs while the other contained three runts about one third the natural size and one normal egg. These nests were in hawthorn bushes on the slope of a hill and not more than twenty-five paces apart. This is singular, since so few runts were seen among the great number of eggs observed.

While noting many Mockingbirds' nests the following happenings were observed:—If a nest and eggs were removed the parents would build another nest and deposit a second set of eggs, while on the other hand, as was seen in several cases, if by some mishap one or several eggs became broken in the nest the birds did not attempt to build or lay again that season, though they remained in the immediate vicinity.

The sets consisted of four or five eggs, and a series of them presented great differences in size, color, and markings. The earliest eggs were seen April 20, 1896, and the latest on June 24, 1899.

74. *Galeoscoptes carolinensis*. CATBIRD.—The Catbird was found more or less abundantly in most parts of the State; some localities, however, seemed entirely without them. In the east central portion they nest in the bushes bordering lakes, and the nests often overhang the water. They also nested in gardens and orchards and at times very near houses. The earliest complete set was noted on May 2, 1900, and the latest on June 17, 1899. All sets contained four eggs.

75. *Toxostoma rufum*. BROWN THRASHER.—This was one of the commonest species observed. They were found in the bushes along the edges of woods, in orchards and along the roadsides. The nests were usually placed in low bushes and vines, but some were high up in trees, and two were found on the ground under the edges of small brush piles. April 21, 1900, the earliest set was noted and June 8, 1899, the latest unhatched eggs were seen. A series of sets from this bird show great variations in their ground color and markings. Four or five eggs composed the sets. In the spring of 1897 a nest of the Mockingbird containing two of its own eggs also contained one egg of the Brown Thrasher.

76. *Thryothorus ludovicianus*. CAROLINA WREN.—More different places were selected by this bird for nesting sites than by any other observed. Nests were noted in tin cans placed under the eaves of sheds, in the eaves of well-houses, between the logs of cotton houses, in the hollows of low stumps, on the timbers under country bridges, between the

logs and weatherboarding of cabins, and strangest of all in the seat of an old pair of hunting trousers that hung on the wall of a farmhouse gallery. The nest was also found in brush piles. The birds were very conspicuous on account of their loud song, but the nest was often difficult to locate even when one was sure of its approximate position. These birds will often lay as many as three sets during one season, and they usually rear two broods within the summer. They are commonly termed in this section 'House Wren,' but of course are not confounded with the true House Wren. April 17 and June 18 are the extreme dates of observing sets. The set number was almost always five, rarely six.

77. *Sitta pusilla*. BROWN-HEADED NUTHATCH.—In the old pine deadenings of Adams County this small bird was found nesting in considerable numbers. They dug their own burrow but it was a badly botched affair, nothing about it suggesting the even smoothness of a woodpecker's hollow. The Nuthatch makes a small entrance through the bark of a dead snag, then usually, rather than burrow into the stump itself, they scooped out an irregular cavity by removing the soft wood that generally lies just under the bark. This burrow ran a crooked course but generally extended ten or fifteen inches below the entrance. In this cavity they placed a nest of soft fibers, moss, feathers, cotton, and wool. The burrows were usually only a few feet from the ground but one was found twelve feet up. The nests were best located by pulling the bark from pine stumps in a deadening where the birds were seen to be plentiful, unless one chanced to see them building or entering their burrow. On one occasion when the bark was pulled away exposing a nest while the female sat upon it, she could not be made to leave until pushed off with my finger.

These tiny birds are early layers, nesting at the time when the hawks, owls, and crows do. March 17, 1902, the earliest set was taken and the latest eggs were found on April 19. Sets consisted of five eggs.

78. *Parus bicolor*. TUFTED TITMOUSE.—Around the edges of woods, in deadenings, and often in groves the Tufted Titmouse was a common bird. The nests were found in natural cavities and in the deserted burrows of woodpeckers. This species, the Brown-headed Nuthatch, and Carolina Chickadee were often found nesting in the same vicinity, probably because they all select similar trees and stumps as homes. In the nest building of the Titmouse were used such materials as leaves, moss, fibrous bark, feathers and hair. The sets were composed of five and six eggs. On April 20, 1901, the earliest set was taken, and May 22, 1903, was the latest date on which eggs were found.

79. *Parus carolinensis*. CAROLINA CHICKADEE.—This bird nested in natural cavities and in the burrows of the smaller woodpeckers. The favorite sites were old fence posts which so often contain hollows. By walking along a line of posts in the country districts one seldom fails to find a Chickadee's nest. They also nested in deadenings where hollows were plentiful. All of the nests were composed partly of green moss,

other ingredients being feathers, cotton, wool, and fibers. Most sets contained five eggs but six were not uncommon, and Mr. R. P. Gillespie took a set in Oktibbeha County that contained nine,—these are now in a collection at the State Agricultural College. Most eggs were found during the month of April, and after the first of May nearly all nests contained young.

80. *Poliophtila cærulea*. BLUE-GRAY GNATCATCHER.—Although this bird was often seen in most woods only two of its nests were found. The nests were composed of sycamore fuzz and other plant down, some hair, and small feathers as lining, while the outer part was almost completely covered with lichens so as to resemble very closely a mossy tree knot. The first nest was taken May 16, 1897, from an old honey locust tree near the edge of a wood. The second nest was found May 9, 1902, in another locust tree which was located in a small grove seventy yards from a college dormitory. Both sets contained four eggs.

81. *Turdus mustelinus*. WOOD THRUSH.—This handsome thrush was found rather abundantly in most low woodlands as well as in the yards of the towns. The nests were found placed on horizontal branches, often a considerable distance from the tree trunk. The outer wall of the nest was composed of sticks and leaves, which were plastered inside with a heavy layer of mud, the mud was then covered with fine fibrous roots as a nest lining, but these were often so thinly laid on that the mud was visible over almost the entire nest floor. Some sets had three eggs and others four. May 4, 1900, was the earliest set date and May 27, 1897, was the latest; most sets were taken about May 10.

82. *Merula migratoria*. AMERICAN ROBIN.—I have never observed this bird in Mississippi during the breeding season, though a collector in the northern part of the State once showed me a set of four Robin's eggs that he claimed to have collected in the county that year.

83. *Sialia sialis*. BLUEBIRD.—Bluebirds were found nesting in many kinds of cavities; the strangest nesting site observed was the hollow iron coupling of a flat car which stood for many weeks on a side track. The old style link and pin couple had a long hollow iron neck and back; in this neck a Bluebird had built its nest and deposited a set of five eggs. These birds lay several sets during the season if their eggs are taken away, and will often complete the set if the eggs are removed one by one. Sets of pure white eggs were observed on two occasions. On March 29, 1902, the earliest sets were taken and June 3, 1896, was the latest, this being a second set of the season. The number of eggs laid was either four or five.

The notes recorded above, with those which appeared under a similar title in the April number of this journal, may be conveniently summarized in the table below. The full meaning of the columns is to be understood as follows: The *number* refers to

the number placed before the name of the same species in the above articles; the *species* is given by the common name; under *occurrence* three terms are used: common — indicating that the bird was abundant and readily found; casual — birds not popularly known though not really rare; rare — birds that were seldom seen and few nests found; under *nest location* will be given the general character of the vicinity in which the nests were usually built; *earliest date* indicates the earliest date of the season on which I recorded nests of the given species; *latest date* the other extreme date; *maximum date* means the season during which most eggs of the species were to be found; *number of nests* is self-explanatory, but I may add that in several cases of the common species this number does not represent all the nests seen but only those specially observed.

No.	Species.	Occurrence.	Nest-location.	Earliest date.	Latest date.	Maximum date.	No. of nests.
1	Pied-billed Grebe	Common	—	—	—	—	—
2	Royal Tern	Common	Sandy islands	May 28	June 21	June	18
3	Cabot's Tern	Common	Sandy islands	May 28	June 21	June	16
4	Anhinga	Common	Swampy woods	Apr. 21	May 14	Apr. (late)	22
5	Least Bittern	Rare	—	—	—	—	—
6	Louisiana Heron	Common	Marshes	May 11	June 12	May	29
7	Little Blue Heron	Common	Marshes	Apr. 13	June 4	May	24
8	Green Heron	Common	Stream banks and marshes	May 5	June 11	May (late)	14
9	Black-crowned Night Heron	Casual	Marshy woods	Mar. 21	May 11	Apr.	13
10	King Rail	Rare	Reeds in marsh	June 29	—	—	1
11	Clapper Rail	Casual	Reeds in marsh	May 28	—	—	1
12	Sora	—	—	—	—	—	—
13	Spotted Sandpiper	Rare	—	—	—	—	—
14	Killdeer	Common	Open fields	Apr. 17	June 6	May	31
15	Bob-white	Common	Hay fields	June 3	June 29	June	42
16	Wild Turkey	Casual	Woods	May 14	May 26	May	2
17	Mourning Dove	Common	Pastures and hedges	May 1	June 19	May	51
18	Turkey Vulture	Common	Deep woods	Mar. 21	Apr. 25	Mar. (late)	5
19	Black Vulture	Common	Deep woods	Mar. 11	Apr. 19	Mar. (early)	13
20	Cooper's Hawk	Common	Deep woods	Mar. 2	Apr. 5	Mar. (mid.)	11
21	Red-tailed Hawk	Common	Deep woods	Mar. 3	Apr. 24	Mar. (mid.)	8
22	Red-shouldered Hawk	Common	Deep woods	Mar. 6	Apr. 18	Mar. (late)	15
23	Broad-winged Hawk	Rare	Open pasture	Apr. 4	Apr. 13	—	3
24	Bald Eagle	Casual	—	—	—	—	—
25	American Sparrow Hawk	Common	Edges of woods	Mar. 18	Apr. 2	Mar. (late)	9
26	Barred Owl	Common	Deep woods	Feb.	Mar. 11	Feb.	8
27	Screech Owl	Common	Old fields	Mar. 14	May 3	Apr. (early)	17
28	Great Horned Owl	Rare	—	—	—	—	—
29	Yellow-billed Cuckoo	Common	Groves	May 5	June 21	May (late)	39
30	Belted Kingfisher	Common	Cliffs and stream banks	Apr. 28	June 7	May (early)	14

No.	Species.	Occurrence.	Nest-location.	Earliest date.	Latest date.	Maximum date.	No. of nests.
31	Ivory-billed Woodpecker	Casual	Edge of woods	Apr. 20	May 18	Apr. (late)	—
32	Downy Woodpecker	Casual	Woods	Apr. 1	May 8	Apr. (early)	7
33	Pileated Woodpecker	Common	Fields and pastures	May 12	June 14	May (late)	17
34	Red-headed Woodpecker	Common	Edge of woods	Apr. 24	June 2	Apr. (late)	62
35	Red-bellied Woodpecker	Common	Fields and pastures	Apr. 12	June 4	May (early)	20
36	Flicker	Common	Deep woods	May 3	May 23	May (early)	65
37	Chuck-will's-widow	Common	Fields and pastures	May 5	June 2	May (mid.)	4
38	Nighthawk	Common	Chimneys	May 15	June 17	May (late)	10
39	Chimney Swift	Common	Groves	May 9	May 14	May (early)	23
40	Ruby-throated Hummingbird	Common	Fields and pastures	May 10	June 13	May (late)	2
41	Kingbird	Common	Roadsides and edge of woods	May 10	May 27	May (late)	47
42	Crested Flycatcher	Common	Sparse woods	Apr. 28	June 19	May (mid.)	23
43	Wood Pewee	Casual	Deep woods	May 17	June 19	May (late)	11
44	Green-crested Flycatcher	Casual	Various	May 4	June 19	May (late)	7
45	Blue Jay	Common	Pine woods	Mar. 29	June 5	April	149
46	American Crow	Common	Marshes and orchards	Mar. 9	Apr. 22	Mar. (mid.)	42
47	Red-winged Blackbird	Common	Fields	May 12	June 27	June (early)	118
48	Meadowlark	Common	Groves	Apr. 26	June 7	May (mid.)	29
49	Orchard Oriole	Common	Groves and fields	May 4	June 8	May (mid.)	40
50	Baltimore Oriole	Casual	Marshes	May 5	May 26	May (mid.)	23
51	Purple Grackle	Common	Marshes	May 3	June 6	May (mid.)	47
52	Boat-tailed Grackle	Casual	Various	—	—	—	14
53	English Sparrow	Common	Pastures	—	—	Almost entire year	318+
54	Chipping Sparrow	Casual	Fields	May 7	June 10	May	19
55	Field Sparrow	Common	Edge of wood	Apr. 14	May 21	Apr. (late)	32
56	Bachman's Sparrow	Rare	Thickets	May 14	—	—	1
57	Towhee	Casual	Various	May 6	June 6	May (mid.)	12
58	Cardinal	Common	Edge of woods	Apr. 8	May 26	May (early)	93
59	Blue Grosbeak	Casual		May 9	June 1	May	7

No.	Species.	Occurrence.	Nest-location.	Earliest date.	Latest date.	Maximum date.	No. of nests.
60	Indigo Bunting	Casual	Fields and woods	May 6	June 9	May (mid.)	9
61	Painted Bunting	Rare	Roadsides	Apr. 28	June 6	May (early)	23
62	Summer Tanager	Casual	Hay fields	May 9	May 23	May (mid.)	16
63	Dickcissel	Casual	Martin houses	May 2	May 23	May	51
64	Purple Martin	Common	Cliffs and banks	Apr. 21	June 12	May	30
65	Bank Swallow	Common	Pastures and orchards	Mar. 30	June 2	April	48
66	Loggerhead Shrike	Common	Woods	May 9	June 14	May (late)	19
67	Red-eyed Vireo	Common	Woods	May 28	June 14	May	1
68	Warbling Vireo	Rare	Woods	May 10	May 29	May	13
69	White-eyed Vireo	Common	Wood edges	May 10	May 29	May	1
70	Oven-bird	Rare	Marshes	May 26	May 26	May (early)	20
71	Maryland Yellow-throat	Common	Wood edges	Apr. 28	May 26	May	19
72	Yellow-breasted Chat	Casual	Various	May 6	June 24	May (mid.)	135+
73	Mockingbird	Common	Thickets	Apr. 20	June 17	May (late)	31
74	Catbird	Common	Thickets	May 2	June 8	May (early)	81
75	Brown Thrasher	Common	Various	Apr. 21	June 18	May (early)	59
76	Carolina Wren	Common	Pine deadenings	Apr. 17	June 19	Apr. (early)	9
77	Brown-headed Nuthatch	Casual	Near wood edges	Mar. 17	May 22	May (early)	11
78	Tufted Titmouse	Casual	In fence posts	Apr. 20	May 2	Apr. (mid.)	18
79	Carolina Chickadee	Common	Groves	Mar. 30	May 16	May (mid.)	2
80	Blue-gray Gnatcatcher	Rare	Woods and groves	May 9	May 27	May (mid.)	15
81	Wood Thrush	Casual	Various hollows	May 4	June 3	Apr. (late)	89
82	American Robin	Common		Mar. 29			
83	Bluebird	Common					